

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of the Claims:

1. (currently amended) A memory card, comprising:  
a non-volatile memory;[[,]]and  
a memory controller for controlling operation of said non-volatile memory,  
wherein said memory controller is ~~capable of~~  
~~interfacing configured to interface with outside an external~~  
~~device~~ according to a predetermined protocol,[[;]]  
~~wherein, said memory controller controls, in a memory~~  
~~control~~ in response to ~~an~~ a write access instruction from  
~~outside, a the external device, said memory controller~~  
controls a first process for adding an error correction code  
to data which is written to said non-volatile memory from  
~~outside the external device, or a~~  
wherein, in response to a read access instruction from  
the external device, said memory controller controls a  
second process for conducting ~~an~~ error detection and  
correction, ~~process, by~~ using said error correction code, ~~to~~  
on data which is read out from said non-volatile memory to  
~~outside, the external device, and~~

wherein said memory controller controls a third process for conducting ~~an error detection and correction process to~~ on memory information of stored in said non-volatile memory, ~~by using~~ said error correction code, independently of one of said first process and said second process in response to ~~the access instruction from outside.~~

2. (currently amended) A memory card according to claim 1, wherein said memory controller ~~comprising operation control means for instructing the error detection and correction controls~~ performing said third process at ~~predetermined time intervals independently of said process in response to the access instruction from outside.~~

3. (currently amended) A memory card according to claim 1, wherein said memory controller ~~comprises operation control means for instructing the error detection and correction process independently of said process in response to the access instruction from outside,~~ controls performing said third process in response to connection of an electric power supply to said memory card.

4. (currently amended) A memory card according to claim 1, wherein said memory controller ~~comprises operation control means for changing a~~ controls said third process to store error-corrected memory information in a substitute

memory area, different from a first memory area of said non-volatile memory storing the memory information, ~~for error-corrected memory information~~ when an accumulated number of error generation times occurrences for the first memory area exceeds a predetermined number of error occurrences for the first memory area ~~times in the error detection and correction process independently of the process in response to the access instruction from outside.~~

5. (currently amended) A memory card according to claim 1, wherein said memory controller ~~comprises operation control means for changing a~~ controls said third process to store error-corrected memory information in a substitute memory area, different from a first memory area of said non-volatile memory storing the memory information, ~~for error-corrected memory information~~ when a number of error generated bits for the first memory area exceeds a predetermined number of error bits for the first memory area ~~in the error detection and correction process independently of the process in response to the access instruction from outside.~~

6. (currently amended) A memory card according to claim 4, wherein:

said non-volatile memory includes, as an information memory area, a data area, a substitution area for substituting for a defective portion of said data area, a substitution managing area for defining correspondence between said data area and said substitution area, and a parameter area; and

~~said operation control means~~ memory controller obtains ~~information of~~ said predetermined number of ~~times~~ error occurrences from said parameter area, and ~~changes the memory area of said error corrected memory information to~~ said substitution area includes said substitute memory area.

7. (currently amended) A memory card according claim 5, wherein:

said non-volatile memory includes, as an information memory area, a data area, a substitution area for substituting for a defective portion of said data area, a substitution managing area for defining correspondence between said data area and said substitution area, and a parameter are; and

~~said operation control means~~ memory controller obtains ~~information of~~ said predetermined number of error bits from said parameter area, and ~~changes the memory area of said error corrected memory information to~~ said substitution area includes said substitute memory area.

8. (currently amended) A memory card according to claim 4, wherein:

said non-volatile memory includes, as an information memory area, a data area, a substitution area for substituting for a defective portion of said data area, a substitution managing area for defining correspondence between said data area and said substitution area, and a parameter area; and

said ~~operation control means~~ memory controller records the accumulated number of error generation times generated occurrences for the first memory area in said error detection and correction process in a corresponding data area in said non-volatile memory, and uses ~~changes the memory area of said error corrected memory information to~~ said substitution area as the substitute memory area.

9. (currently amended) A memory card according to claim 2, wherein said ~~operation control means is a program controlled data processor~~ memory controller includes a central processing unit and performs said error detection and correction by program execution of said central processing unit.

Claims 10-18. (canceled).

19. (new) A memory card, comprising:

a non-volatile memory; and

a memory controller for controlling operation of said non-volatile memory,

wherein said memory controller is configured to interface with an external device according to a predetermined protocol,

wherein, in response to a write access instruction from the external device, said memory controller controls a first process for adding an error correction code to data which is written to said non-volatile memory from the external device,

wherein, in response to a read access instruction from the external device, said memory controller controls a second process for conducting error detection and correction, using said error correction code, on data which is read out from said non-volatile memory to the external device, and

wherein said memory controller controls a third process for conducting error detection and correction on memory information stored in said non-volatile memory, using said error correction code, independently of a process performed in response to an access corresponding to one of said read

access instruction and said write access instruction from  
the external device.